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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,938	06/20/2003	Atsushi Magara	9281/4578 N US02051	9448
7590 Brinks Hofer Gilson & Lione P.O. Box 10395 Chicago, IL 60610			EXAMINER GARCIA, CARLOS E	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 02/08/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/600,938

Applicant(s)

MAGARA, ATSUSHI

Examiner

Carlos E. Garcia

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/20/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanjyo (US 5,050,024) in view of Kikuri (US 6,473,273).

Nanjyo discloses a rotary double azimuth magnetic head (see Fig.3 for further clarification) comprising: at least one pair of magnetic heads (such as 21 and 31 in Fig.18) having gaps (defined by g in Fig.18), whose azimuth angles are different from each other (inherent in the art) and a rotating cylinder D, wherein each of the pair of magnetic heads (21 or 31) is formed by an I-type core and a C-type core with a winding slot (as shown in Fig.18), which abut against each other having the corresponding gap interposed there between (see Fig.18), and the gap lies closer to one side with respect to the width direction of the corresponding I-type and C-type cores, and wherein, in the rotating direction of the rotating cylinder, the C-type core of one of the magnetic heads moves ahead of the I-type core of the same and the I-type core of the other magnetic head moves ahead of the C-type core of the same. Furthermore, Nanjyo discloses the necessity for minimizing the error within several microns of the difference d between the distances

(a) and (b) from the upper surface of a head base 32 to the edges of each respective gap (g) of the heads 21 or 31 (see Figs.3 and 18; col.1, lines 13-27, 44-50).

However, Nanjyo fails to disclose or fairly suggest comprising boards for having the corresponding magnetic heads fixed thereto, wherein the magnetic heads are arranged so as to have the same height from the corresponding gaps to board surfaces of the corresponding boards and the magnetic heads are symmetric (interpreted from applicant specification para.0055) with respect to the rotating axis of the rotating cylinder.

Kikuiri teaches arranging bases 5 for two magnetic heads (H1 and H2) of a rotary drum D to make gap height H_0 (as shown in Fig.3A) equal for both gaps (G_b and G_b') to improve the reproducing output of the rotary head (see Fig.3A; col.1, lines 47-57; col.2, lines 13-26, 30-40; col.8, lines 49-63). Additionally, Kikuiri shows (see Figs.3A) that the magnetic heads (H1 and H2) are positioned at opposite edges of the rotary drum D (as shown in Fig.4A for further clarification) and are therefore symmetric to the rotating axis of the rotary drum, known to be a conventional practice (see col.9, lines 6-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the base members to hold the magnetic heads as taught by Kikuiri within the double azimuth structure as disclosed by Nanjyo in order to minimize the difference in gap height of both heads and obtain a rotary recording head with a high reproducing output.

Re claim 2: Nanjyo in view of Kikuiri further disclose each of the magnetic heads has one and another track grooves (as shown in Fig.3), having the corresponding gap

interposed there between and having different depths from each other, for regulating a track width of the gap (as shown in Fig.3).

Re claim 4: Nanjyo in view of Kikuri further disclose the tape-medium recording and playback apparatus comprising a tape-loading path (inherent in the art of rotary head structures and magnetic recording tape mediums) formed by a tape medium which is led out from a tape reel (tape reels are used to guide the tape) and is wound around the rotary head according to claim 1.

Re claim 5: Nanjyo in view of Kikuri further disclose wherein the tape-loading path comprises the rotary head to be driven to rotate; two guide posts respectively disposed upstream and downstream of the rotary head (inherent in the art), for guiding the tape medium led out from the tape reel in order to wind the tape medium around the rotary head; and a capstan disposed downstream of the rotary head, for causing the tape medium to run (inherent in the art).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanjyo in view of Kikuri further in view of applicant admitted prior art.

However, Nanjyo in view of Kikuri fails to disclose or fairly suggest that one magnetic head has an azimuth angle equal to or greater than +10 degrees with respect to the normal of the board surface of the corresponding board and the other magnetic head

has an azimuth angle equal to or less than -10 degrees with respect to the normal of the board surface of the corresponding board.

It would have been an obvious matter of design choice to use the standardized azimuth values of ± 300 degrees since the applicant has not disclosed that using this standard azimuth value solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with lower or higher azimuth angles or newly standardized values.

Conclusion

4. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos E. Garcia whose telephone number is 571-270-1354. The examiner can normally be reached on 8:30 am to 5:00 pm, Monday thru Thursday and 8:30 to 4:00 pm, Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Carlos E. Garcia

/ William J Klimowicz /

2/4/2008

William J. Klimowicz
Primary Examiner
Art Unit 2627